



ESH Legislation in Beryllium Management at AWE Aldermaston

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BERYLLIUM FACILITY

- Introduction
 - The Be facility consists of a large machine shop, a metallography suite, inspection bays and waste processing facilities. Attached to the processing areas area offices, messing areas and conference rooms.

BERYLLIUM

- Exposure to Be, via inhalation, may induce an immune response which can lead to CBD.
- Be embedded into the skin may lead to granulomas.
- Legal duties to control exposure to Be arise from Control of Substances Hazardous to Health (COSHH) Regulations 2002 (as amended) enacted under the Health and Safety at Work etc Act 1974

Governance

- UK legislation
- EA
- HSE
 - ONR



Legislative Hierarchy at AWE

- Legislation / Regulations
 - AWE's Management Safety Procedures (MSP's) or Company Safety Instructions (CSI's)
 - Facility Safety Instructions
 - Be Safety Booklet
 - Be Safety Leaflet

UK HEALTH & SAFETY LEGISLATION (1)

- Statute Law
 - AKA “legislation” this is produced through the parliamentary process and supersedes all other forms of law.
- The Health and Safety at Work Act (HSWA) 1974.
 - This is a statute that delegates to Governmental departments power to create subordinate legislation (i.e. regulations) such as Control of Substances Hazardous to Health (COSHH) Regulations 2002.
 - The HSWA Section 2(1) places a general duty on an employer;
 - ‘to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees’.

UK HEALTH & SAFETY LEGISLATION (2)

- The Management of Health and Safety at Work Regulation 1999 stipulates the requirement for employers to make suitable and sufficient risk assessment of the risks to health and safety of his employees to which they are exposed whilst they are at work
- Within the Be facility the Control of Substances Hazardous to Health (COSHH) Regulations 2002 amended 2005 is the driving requirement to assess, monitor and control the exposure of Be to personnel.

COSHH

- Regulation 6 – a suitable and sufficient COSHH assessment is to be carried out establishing;
 - the risk to health,
 - to identify steps to adequately prevent or control exposure,
 - determine the requirement for workplace monitoring and
 - the need for health surveillance



CLASSIFICATION: _____

Reference:		Revision	
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COSHH ASSESSMENT RECORD issue 5.1

1. COSHH Assessor Information:					
Assessor:	Please add here	Extn:	Please add here	Building:	Please add here
Expand as necessary					
2. Activity Process Details:					
Building & location identification:				Frequency of work activity	
Please add here				Please add here	
Work process/ activity description					
Please add here					
Expand as necessary					
3. Hazard Identification:					
Substance/ preparation/ intermediate (Identify product (in bold) & constituents)	CAS Number	WEL	State (product)	Quantity/ % (product/ constituents)	Risk Phrases or Hazard Statements
Expand as necessary					
4. Consideration of Exposure Prevention / Substitution:					
What alternative processes/substances have been put in place or considered to prevent / minimise exposure? (include reasons for rejecting them)					
Please add here					
What health, safety and environmental restrictions from the CRAP Substances List apply? Please give relevant restriction details below.					
Please add here					
Justification details (if required)		Please add here			
Expand as necessary					
5. Exposure Assessment:					
Exposure group title	No. in group	Exposure level (pre-controls)	Exposure Route (pre-controls)	Duration of exposure	Frequency
Please add here	Please add here	Please add here	Please add here	Please add here	Please add here
Please add here	Please add here	Please add here	Please add here	Please add here	Please add here
Expand as necessary					
6. Additive/ Synergistic Exposure Assessment:					
State any known additive /synergistic health effects from exposure to Substances Hazardous to Health given in Section 3:					
Please add here					



Control measure Please select as appropriate & give details	Required		In place & effective		Details of control measure or reference documentation
	Yes	No	Yes	No	
Enclosure / Partial enclosure:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Local Exhaust Ventilation (LEV):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
General Ventilation:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Access Controls, Signs & Labelling:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Limitation of Exposure Time:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Limitation of Quantities:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Personal Protective Equipment (PPE)/ Respiratory Protective Equipment (RPE):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hygiene Measures:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other (please specify):	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Expand as necessary

8. Commissioning/ Testing & Monitoring (of Control Measures):

Control measure (Add as applicable, see section 7 above)	Maintenance/ monitoring requirements	In place	
		Yes	No
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

Expand as necessary

9. Information/Instruction/Training:

* Indicate as required	Supervisors	Operators/ Staff	Visitors/ Other
Awareness Training Sessions / Toolbox Talk			
Specific / Process Training (give detail)			
Pre-work Team brief/ talk			
Assessment & SSoW discussions/ development work – e.g. safety circles			
Information given as part of local induction/ orientation/PDP			
Other (specify)			

Expand as necessary

10. Information Sources & References:

Document Type	Reference (where relevant)
Identify: previous monitoring reports /assessments	
Safety Data Sheet (Manufacturer, Title & date):	
COSHH Essentials control approach sheets:	
Local Operating Procedures/ rules:	
Risk Assessment:	
Emergency/Spillage Procedures:	
Other (add as necessary):	

Expand as necessary

11. Health Assessment:

	Please delete as appropriate*
Is Medical Surveillance mandatory under Schedule 6 of COSHH?	*Yes/ No



CLASSIFICATION: _____

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What are the potential health effects from the exposure identified in this assessment? Please give detail.	Please add here
Is Health Assessment required under CSI 405 arrangements?	*Yes/ No
Are any other Health Assessment specific local arrangements required? If so please give detail (e.g. responsible persons).	Please add here
Details / numbers of any operatives who are susceptible or have pre-existing health conditions who must be considered (see guidance):	Please add here

12. Assessment Summary - Adequacy of Control:

	Please delete as appropriate*
Have the principles of good practice (Schedule 2A) been applied?	*Yes/ No
For carcinogens and/or mutagens , have all additional measures from Regulation 7(5) been adopted where appropriate?	*Yes/ No/ Not Applicable
For carcinogens, mutagens or asthmagens , has exposure been reduced to the lowest level reasonably practicable?	*Yes/ No/ Not Applicable
For substances with WELs , has exposure been reduced to below the WEL?	*Yes/ Not Applicable/ Further work required
For lead and lead compounds , where exposure has been assessed as significant:	
(a) Are employees provided with appropriate protective clothing?	*Yes/ No/ Not Applicable
(b) Are lead-in-air concentrations being measured?	*Yes/ No/ Not Applicable
(c) Are employees under Medical Surveillance?	*Yes/ No/ Not Applicable

13. Assessment Conclusions:

Please select assessment status:		*Assessment Approved – Issue	
*delete as applicable		*Assessment Not Approved - Review	
Assessor Signature:			
Issue Date:		Review Date:	
Additional Signatures: (Delete or append as applicable)			
Process Manager/ Owner:		Signature:	Date:
Facility Manager / Representative:		Signature:	Date:
Supervisor/ Line Manager:		Signature:	Date:

Distribution: Workplace, DCC, Facility Manager, Line Managers of exposure groups (as applicable)

Health Surveillance

- Where employees are liable or likely to be exposed to a substance hazardous to health an employer must ensure those persons are under health surveillance
- Health surveillance records are retained for at least 40 years from the last entry made
- Line managers along with COSHH assessors ensure that an individual's health surveillance remains valid.



AWE Standards

- Management of Exposure to Beryllium at AWE
 - Health Surveillance (CSI 405 form 'Application for Health Assessment')
 - H1 – high or significant
 - H3 – low or insignificant
- WEL for Be $2\mu\text{g}/\text{m}^3$ (8Hr TWA) in accordance with EH40
 - Alert level – $0.5\mu\text{g}/\text{m}^3$
 - Action level – $1.0\mu\text{g}/\text{m}^3$
- No legal limit with regards to static air sampling

UK ENVIRONMENTAL LEGISLATION

- Environmental Protection (Duty of Care) Regulations 1991
- Landfill Directive 1999
- List of Waste Regulations 2005
- Hazardous Waste Regulations 2005 & 2009
- Waste Electrical & Electronic Equipment Regulations 2006
- Waste Regulations (England and Wales) 2011
- Pollution Prevention and Control Regulations (England and Wales) 2000
 - Environmental permit – non ferrous metals / conditions of permit

Environmental Permit

- A permit has been issued under regulation 10 of the Pollution Prevention and Control Regulations (England and Wales) 2000 by the Environment Agency (UK Regulatory Body) for 'non ferrous metal activity'
- Conditions of permit
 - Management
 - Operations
 - Emissions and monitoring
 - Information

Summary

- Our primary concern is ensuring the facility is compliant with current legislative requirements and that expectations of Regulatory bodies are met
- This is achieved through a:
 - Defined and structured process of working within the Be designated area
 - Which in turn is supported by health, safety and environmental practitioners working directly with the facility,
 - Knowledge and guidance being sourced from subject matter experts and
 - A close working relationship with staff